Exhibit 300: Capital Asset Summary

Part I: Summary Information And Justification (All Capital Assets)

Section A: Overview & Summary Information

Date Investment First Submitted: 2010-03-22
Date of Last Change to Activities: 2011-09-23
Investment Auto Submission Date: 2012-02-27
Date of Last Investment Detail Update: 2011-09-15
Date of Last Exhibit 300A Update: 2012-02-27
Date of Last Revision: 2012-02-27

Agency: 010 - Department of the Interior **Bureau:** 10 - Bureau of Reclamation

Investment Part Code: 01

Investment Category: 00 - Agency Investments

1. Name of this Investment: BOR1-LCDCSS (Lower Colorado Dams Control Systems and Services)

2. Unique Investment Identifier (UII): 010-000000294

Section B: Investment Detail

1. **Provide a brief summary of the investment, including a brief description of the related benefit to the mission delivery and management support areas, and the primary beneficiary(ies) of the investment. Include an explanation of any dependencies between this investment and other investments.**

The Lower Colorado Dams Control Systems and Services (LCDCSS) IT investment is comprised of two components: HVRSCADA (Hoover Systems Control and Data Acquisition) has both overall plant control and individual generator unit control functions. The Hoover Dam Control Center Operators use eight workstations to operate the water and power delivery of three Dams (Hoover, Davis and Parker) for Reclamation s Lower Colorado Dams Office. HVRSCADA is an isolated network of database and applications servers with Intellution iFIX industrial automation software. HVRSCADA provides automatic generation control of Hoover Dam power generation to match power system total energy production to power system total energy consumption. Today, automation of 17 units at Hoover Dam and 5 units at Davis Dam is performed by numerous Programmable Logic Controllers (PLC S) on subnets of the isolated network. The remaining 4 units at Parker Dam are automated using remote terminal units (RTU S) at present. A Unit Control Modernization (UCM) project is deploying PLC-based control at the 4 units in Parker Dam in 2012. The PLC unit control equipment deployed on 4 units in 2012 was purchased prior to 2010. Overall plant control database and applications hardware are also being upgraded for each unit as the unit modernization is deployed. Database and applications hardware and PLC interface hardware deployment will be completed in the three plants in 2013, at which time HVRSCADA will be in steady state operation. HWWMS (Hoover Waste Water Management System) is an automated control

system that monitors the water treatment and wastewater plants for the domestic water supply and wastewater discharge of Hoover Dam. The system ensures the plants operate in accordance with Nevada (domestic water system) and Arizona (wastewater discharge) laws and regulations. This system is in steady state operation. The water and power contractors, who fund the Boulder Canyon Project and the Parker-Davis Project, are customers of LCDCSS. These customers represent water and power interest from California, Arizona, Nevada, and the Republic of Mexico. Western Area Power Administration (Western) schedules Hoover Dam power delivery. The Boulder Canyon Operations Office (BCOO) schedules water delivery from the three dams.

2. **How does this investment close in part or in whole any identified performance gap in support of the mission delivery and management support areas? Include an assessment of the program impact if this investment isn't fully funded.**

No Congressional appropriations are used to fund this Reclamation IT Investment. The water and electrical power customers of Boulder Canyon Project (for Hoover Dam) and Parker - Davis Project (for Davis and Parker Dams) provide the funding. They have approved this investment through separate ten-year planning processes for each facility. This investment serves to achieve customer goals and Reclamation's water delivery and hydro-power generation mission responsibilities and business functional requirements in support of DOI Strategic Goals. These goals and objectives would not be accomplished as effectively if the water and power customers did not continue to fund this investment in full. The Boulder Canyon and Parker-Davis Projects are updated with budgetary approval by the customers annually.

3. **Provide a list of this investment's accomplishments in the prior year (PY), including projects or useful components/project segments completed, new functionality added, or operational efficiency achieved.**

The PY, 2011, saw HVRSCADA primarily in normal steady-state operations with one continuing project and a series of unexpected, legally mandated changes: Steady-state operations included: oo Annual purchase of software licenses and hardware warranty services. oo Replenishment of aged servers, network switches, and workstations. The Unit Control Modernization (UCM) completed its 4th phase of the 6 year project with the replacement of serial RTUs by digital PLCs in the unit controls at Davis Dam. Most of the servers at Davis Dam were replaced, inducing a blade server for each generator unit. Numerous systems changes and enhancements became necessary to meet NERC/CIP mandates. oo Significant additional manpower is needed to comply with account management, configuration management, etc. oo XX low-end network switches were replaced with industrial Cisco switches to meet access control requirements. HWWMS continued in steady-state operations with no enhanced capabilities.

4. **Provide a list of planned accomplishments for current year (CY) and budget year (BY).**

In CY 2012 and BY 2013, HVRSCADA will continue normal steady-state operations along with additional efforts to meet NERC/CIP mandates and near completion of the Unit Control Modernization (UCM) project: Steady-state operations included: oo Annual purchase of software licenses and hardware warranty services oo Replenishment of aged servers,

network switches, and workstations including replacement of 23 Dell blade servers plus others projected to be replaced with at virtual architecture The UCM will complete its 5th phase of the 6 year project with the replacement of serial RTUs by digital PLCs in the unit controls at Parker Dam in CY 2012. Most of the servers at Parker Dam will be replaced, including a blade server for each generator unit. The UCM will complete its last phase of the 6 year project with the replacement of station service serial RTUs by digital PLCs in the station service control systems at Hoover, Davis and Parker Dams in BY 2013. There will be new servers including a blade server for each station service PLCs unit at Hoover, Davis and Parker Dams. Continuing to meet NERC/CIP mandates will require: oo The current, enhanced or increased manpower levels to comply with account management, configuration management, etc. NERC/CIP mandates are continuing requirements with time consuming testing and documentation needs. oo Although we do not currently anticipate significant hardware changes, new, as yet undefined; changes to the NERC/CIP standards may again require architecture changes during these two years. While all major portions of the UCM project will be complete, there will be final minor efforts needed to replace serial RTU controls for control of services such as station service power with digital PLC-based controls. These will require not more than 5 replacement servers. HWWMS will continue steady-state operation with software licensing and hardware replenishment costs only - no enhancement of capabilities.

5. **Provide the date of the Charter establishing the required Integrated Program Team (IPT) for this investment. An IPT must always include, but is not limited to: a qualified fully-dedicated IT program manager, a contract specialist, an information technology specialist, a security specialist and a business process owner before OMB will approve this program investment budget. IT Program Manager, Business Process Owner and Contract Specialist must be Government Employees.**

2010-08-31

Section C: Summary of Funding (Budget Authority for Capital Assets)

1.

Table I.C.1 Summary of Funding

	PY-1 & Prior	PY 2011	CY 2012	BY 2013
Planning Costs:	$0.6	$0.0	$0.0	$0.0
DME (Excluding Planning) Costs:	$8.0	$0.0	$0.0	$0.0
DME (Including Planning) Govt. FTEs:	$0.0	$0.0	$0.0	$0.0
Sub-Total DME (Including Govt. FTE):	$8.6	0	0	0
O & M Costs:	$4.3	$0.2	$0.2	$0.2
O & M Govt. FTEs:	$4.5	$0.4	$0.5	$0.5
Sub-Total O & M Costs (Including Govt. FTE):	$8.8	$0.6	$0.7	$0.7
Total Cost (Including Govt. FTE):	$17.4	$0.6	$0.7	$0.7
Total Govt. FTE costs:	$4.5	$0.4	$0.5	$0.5
# of FTE rep by costs:	35	6	6	6
Total change from prior year final President's Budget ($)		$-0.2	$0.0	
Total change from prior year final President's Budget (%)		-18.70%	0.00%	

2. If the funding levels have changed from the FY 2012 President's Budget request for PY or CY, briefly explain those changes:

No impact. No Congressional appropriations are used to fund this Reclamation IT Investment. The water and electrical power customers of Boulder Canyon Project (for Hoover Dam) and Parker - Davis Project (for Davis and Parker Dams) provide the funding. They have approved this investment through separate ten-year planning processes for each facility for CY 2012.

Section D: Acquisition/Contract Strategy (All Capital Assets)

Table I.D.1 Contracts and Acquisition Strategy

Contract Type	EVM Required	Contracting Agency ID	Procurement Instrument Identifier (PIID)	Indefinite Delivery Vehicle (IDV) Reference ID	IDV Agency ID	Solicitation ID	Ultimate Contract Value ($M)	Type	PBSA ?	Effective Date	Actual or Expected End Date
		NONE									

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:
NA

Exhibit 300B: Performance Measurement Report

Section A: General Information

Date of Last Change to Activities: 2011-09-23

Section B: Project Execution Data

Table II.B.1 Projects

Project ID	Project Name	Project Description	Project Start Date	Project Completion Date	Project Lifecycle Cost ($M)
LCD001	LCDCSS SCADA (SS) Maintenance Program Project	Program involves ongoing, steady state, SCADA maintenance of the LCDCSS IT Investment. Life cycle planning is an ongoing part of project planning to insure that the system continues to meet operational needs and does not become obsolete.			
LCD003	LCDCSS (SS) Unit Control PLC and DEP Firmware Upgrade Project	Programmable Logic Controllers (PLCs) & Digital Entry Panels (DEPs) of the unit control portion of the SCADA system have periodic firmware enhancement releases over their lifetime. If these releases enhance system security with no other significant detrimental effects, their use is req'd by NERC/CIP. Exact release dates, cost to purchase or implement, or appropriateness of their functions is not known until release. This project allows change releases to occur as they become available.			

Activity Summary

Roll-up of Information Provided in Lowest Level Child Activities

Project ID	Name	Total Cost of Project Activities ($M)	End Point Schedule Variance (in days)	End Point Schedule Variance (%)	Cost Variance ($M)	Cost Variance (%)	Total Planned Cost ($M)	Count of Activities
LCD001	LCDCSS SCADA (SS) Maintenance Program Project							
LCD003	LCDCSS (SS) Unit Control PLC and DEP Firmware Upgrade Project							

Key Deliverables

Project Name	Activity Name	Description	Planned Completion Date	Projected Completion Date	Actual Completion Date	Duration (in days)	Schedule Variance (in days)	Schedule Variance (%)

NONE

Section C: Operational Data

Table II.C.1 Performance Metrics

Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency
Percent of time that Bureau of Reclamation hydroelectric generating units are available to the interconnected Western Electrical System during daily peak summer demand periods	Percent of time Available	Customer Results - Service Accessibility	Over target	99.500000	99.800000	99.800000	99.500000	Monthly
Unit Control modernization deployment for each unit/transformer: install and commission the equipment at each unit/transformer and deploy the associated new Plant Control database	Number of deployments	Mission and Business Results - Services for Citizens	Over target	17.000000	17.000000	17.000000	17.000000	Semi-Annual
Improve power generation management to maximize supply	Percent operating efficiency	Process and Activities - Productivity	Over target	69.800000	75.000000	75.000000	75.000000	Semi-Annual
Effective water management to optimize supply	Percentage of successful hourly water data transmi	Technology - Reliability and Availability	Over target	99.000000	99.000000	99.000000	99.000000	Monthly
All required supporting document artifacts for this "major" IT Investment (as identified in the current budget year OMB A-11 guidance) will be kept current & be available for	All current artifacts in DOI sharepoint site	Process and Activities - Quality	Over target	8.000000	8.000000	8.000000	8.000000	Semi-Annual

Table II.C.1 Performance Metrics

Metric Description	Unit of Measure	FEA Performance Measurement Category Mapping	Measurement Condition	Baseline	Target for PY	Actual for PY	Target for CY	Reporting Frequency
DOI/OMB review within the 10 day requirement.								